

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

12-28. (Cancelled)

29. (Original) A method for forming a solid electrolytic capacitor, said method comprising:

forming an anode that contains a valve-action metal;

anodizing a surface of said anode to form a dielectric film;

forming a protective coating on said dielectric film, said protective coating containing a relatively insulative, resinous material; and

forming a conductive polymer coating.

30. (Original) A method as defined in claim 29, wherein said resinous material contains esters of unsaturated or saturated fatty acids.

31. (Original) A method as defined in claim 29, wherein said resinous material contains at least one drying oil or derivatives thereof.

32. (Original) A method as defined in claim 31, wherein said drying oil is selected from the group consisting of olive oil, linseed oil, tung oil, castor oil, soybean oil, shellac, and derivatives thereof.

33. (Original) A method as defined in claim 29, wherein said protective coating contains shellac or derivatives thereof.

34. (Original) A method as defined in claim 29, wherein said protective coating is

formed by from a solution containing said relatively insulative, resinous material.

35. (Original) A method as defined in claim 34, wherein said solution further contains a non-aqueous solvent having a boiling point greater than about 80°C.

36. (Original) A method as defined in claim 34, wherein said solution further contains a non-aqueous solvent having a boiling point greater than about 120°C.

37. (Original) A method as defined in claim 34, wherein said solution further contains a non-aqueous solvent having a boiling point greater than about 150°C.

39. (Original) A method as defined in claim 34, wherein said protective coating is formed by dipping said anode into said solution.

40. (Original) A method as defined in claim 29, further comprising applying a curing agent to the protective coating before forming said conductive polymer coating.

41. (Original) A method as defined in claim 39, wherein said curing agent contains sulfuric acid.

42. (Original) A method as defined in claim 29, wherein said protective coating includes multiple layers.

43. (Original) A method as defined in claim 42, wherein each protective coating layer is dried at a temperature ranging from about 30°C to about 300°C.

44. (Original) A method as defined in claim 42, wherein each protective coating layer is dried at a temperature ranging from about 50°C to about 150°C.

45. (Original) A method for forming a solid electrolytic capacitor, said method comprising:

Prelim. Amdt. Dated Aug. 22, 2003

forming an anode that contains a valve-action metal;
anodizing a surface of said anode to form a dielectric film;
applying a solution to said anodized anode that contains a conductive polymer catalyst and a relatively insulative, resinous material; and
thereafter, applying a conductive monomer to said anodized anode, wherein said conductive monomer polymerizes to form a conductive polymer coating.

46. (Original) A method for forming a solid electrolytic capacitor, said method comprising:

forming an anode that contains a valve-action metal;
anodizing a surface of said anode to form a dielectric film;
applying a solution to said anodized anode that contains a conductive monomer and a relatively insulative, resinous material; and
thereafter, applying a conductive monomer catalyst to said anodized anode, wherein said conductive monomer polymerizes to form a conductive polymer coating.

47. (Original) A method for forming a solid electrolytic capacitor, said method comprising:

forming an anode that contains a valve-action metal;
anodizing a surface of said anode to form a dielectric film;
applying a solution to said anodized anode that contains a conductive monomer, a catalyst for said conductive monomer, and a relatively insulative, resinous material, wherein said conductive monomer polymerizes to form a conductive polymer coating.